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         (c) 2009 The HW Wilson Co
  File 144:Pascal 1973-2009/May W4
         (c) 2009 INIST/CNRS


S1    1002508   FETAL  OR FETUS?  OR FOETAL OR FOETUS?
S2     183725   S1/1991-1996
S3     170615   S1/1997-2001
S4     250196   S1/2002-2009
S5     397977   S1 NOT (S2:S4)
limitall s5
S6      58775   TISSUE OR SKIN OR ORGAN  OR ORGANS OR PANCREAS
S7     113540   UTERO OR VIVO OR INTRAUTER? OR INTRA()UTERIN? OR GESTAT? OR
                DONOR
S8      11601   S1(S)S6(S)S7
S9      42321   FETOSCOP? OR HYSTEROTOM? OR BIOPS? OR CUTTING OR SURGER? OR
                GRAFT? OR SURGICAL?
S10     16909   EXTRACT? OR REMOV?  OR WITHDRAW?
S11     62756   CULTUR? OR CULTIVAT? OR EXPAND? OR GROWN OR GROWING  OR EN-
                GINEER? OR EXPRESS?
S12       169   AUTOGRAFT? OR ALLOTRANSPLANT? OR AUTOTRANSPLANT?
S13     15630   TRANSPLANT?
S14     26022   TRANSFER? OR IMPLANT? OR REINFUS? OR RETURN? OR ENGRAFT? OR
                RE()INFUS? OR INSERT? OR RE()INSERT?
S15      1013   S8(S)S9
S16       308   S15(S)S11
S17     27953   S1(10N)S6
S18      6159   S17(S)S7
S19       575   S18(S)S9
S20       156   S19(S)S11
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S21        287   S19(S)(S13 OR S14)
S22        345   S20 OR S21
S23        169   RD  (unique items)
S24        169   S23 AND S1
S25        644   S18(S)S10
S26        324   S25(S)(S11 OR S13 OR S14)
S27        287   S26 NOT S22
S28        154   RD  (unique items)
S29         28   S8(S)S12
S30         15   RD  (unique items)
S31         15   S30 AND S1
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24/7/7 (Item 7 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


09654268 **PMID:** 1698219
**Comparison of growth, neovascularization, and enzymatic function of fetal intestinal grafts in the omentum and renal capsule.**

Tisinai K; Shedd F; Harris R; Unthank J; Grosfeld J; Abu-Dalu K; Grosfeld J
Section of Pediatric Surgery, Indiana University Medical Center, Indianapolis.
Journal of pediatric surgery ( UNITED STATES ) Aug 1990 , 25 (8) p914-6 , **ISSN:** 0022-3468--Print **Journal Code:** 0052631
Publishing Model Print
**Document type:** Comparative Study; Journal Article; Research Support, Non-U.S. Gov't
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed
**Fetal** tissues are less immunogenic and may be a useful donor source for organ **transplantation**. This report compares the fate of **fetal** small bowel segments **transplanted** in the omentum and renal capsule of recipient syngeneic rats. Two-centimeter segments of **fetal** jejunum and ileum were obtained from 26 **donor** 19-day **gestational** age rat **fetuses** and **transplanted** into the subrenal capsule (n = 35) and omentum (n = 40) in syngeneic Fisher rats (weight, 150 g) as free **grafts**. No immunosuppression was used. At 2 weeks posttransplantation, the recipient rats underwent laparotomy and the **grafts** were evaluated for viability, growth, enzymatic function, and revascularization. Viable **grafts** were identified in 27 of 35 renal capsule **grafts** and 34 of 40 omental **grafts**. The order of magnitude of **fetal** growth in the omentum for jejunum was 16 +/- 10 versus ileum 23 +/- 9 (NS). However, in the renal capsule, ileal growth (15 +/- 6) was significantly greater than jejunum (8 +/- 5; P less than .01). Growth for both jejunal and ileal segments was greater in the omentum (P less than .02). The lumen of all omental **grafts** remained patent; however, 26 of 27 renal **grafts** had cystic dilatations and areas of obstruction. Microfil casts of the specimens showed vascular connections (neovascularization) between the **graft** and omentum, a normal serosal vascular pattern, and many submucosal capillary-like vessels. Maltase activity was measured in **fetal grafts** and compared with control pups bred on the same date as the **donor** animals. The **grafts** had a higher maltase level 33.4 +/- 34.6 mumol/min/g than controls 8.3 +/- 2.0 (P less than .005).(

24/7/17 (Item 17 from file: 155)
DIALOG(R)File 155: MEDLINE(R)

09492660 **PMID:** 1969185
**Fetal pig pancreas. Preparation and assessment of tissue for transplantation, and its in vivo development and function in athymic (nude) mice.**

Thompson S C; Mandel T E
Walter and Eliza Hall Institute of Medical Research, Royal Melbourne Hospital, Parkville, Victoria, Australia.
Transplantation ( UNITED STATES ) Mar 1990 , 49 (3) p571-81 , **ISSN:** 0041-1337--Print
**Journal Code:** 0132144
Publishing Model Print
**Document type:** Journal Article; Research Support, Non-U.S. Gov't
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed
The possibility of using xenogeneic islets for **transplantation** in insulin-dependent diabetes mellitus (IDDM) necessitates characterization of their potential for growth and functional differentiation. **Fetal** pig pancreas (FPP) of various gestational ages was examined with respect to morphology, ability to produce insulin before and during **culture**, and development and function in nude mice. Insulin-containing beta cells were present, but distinct islets were not apparent in FPP even in late gestation, and did not develop during **culture**. FPP remained viable and produced insulin for up to 30 days in vitro. Mitotic figures were seen in **cultured** tissue. **Culture** on a gelfoam raft resulted in more viable tissue than free-floating **culture**. **Culture** in a high concentration of O2 (90% O2/10% CO2) was detrimental compared with **culture** in 10% CO2 in air. Responses to static incubation in secretagogues showed that IMBX, theophylline, and tolbutamide all stimulated insulin secretion, but high glucose concentration (5 g/L), arginine, and leucine did not. The potential of this tissue for growth and its ability to regulate blood glucose levels appropriately were tested in athymic (nu/nu) mice. Pancreatic tissue from **fetuses** as young as 4 weeks **gestation** showed growth after **transplantation** into athymic mice, with representation of the major pancreatic endocrine cells demonstrated by selective immunochemical staining. The increase in the size of the **grafts** showed an impressive proliferative capacity, and histology confirmed mitotic activity and islet structure in the **graft**. The amount of endocrine tissue in **grafts** reflected the condition of the explants at the time of **grafting**, and prolonged **culture** times were detrimental to eventual **graft** size. Functional capability of the **grafted** FPP to release insulin in response to hyperglycemia was tested by **transplantation** into mice made diabetic with streptozotocin. Blood glucose levels, animal weights and survival, and the histological appearance of the tissue after **graft** nephrectomy indicated that either fresh tissue or tissue **cultured** for up to 8 days (Gelfoam; 10% CO2 in air) had better eventual **graft** function then FPP **grown** in 90% O2 or **transplanted** as a secondary **graft** following an interim period to allow **gestational** maturation in a nondiabetic nu/nu host. **Return** to euglycemia took 3-4 months after **transplantation** of FPP. The in vitro characteristics of FPP are similar to those reported for human **fetal tissue**, and since FPP is capable of growth and proliferation in **vivo** and has the ability to normalize hyperglycemia, further investigation of FPP to establish its suitability as a source of xenogeneic insulin-secreting tissue for human **transplantation** is warranted.

24/7/19 (Item 19 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


09477783 **PMID:** 2407788
**Intraepidermal formation of Merkel cells in xenografts of human fetal skin.**

Moll I; Lane A T; Franke W W; Moll R
Department of Dermatology, Mannheim Medical School, University of Heidelberg, Federal Republic of Germany.
Journal of investigative dermatology ( UNITED STATES ) Mar 1990 , 94 (3) p359-64 , **ISSN:** 0022-202X--Print **Journal Code:** 0426720
Publishing Model Print
**Document type:** Journal Article; Research Support, Non-U.S. Gov't
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed
An experimental **transplantation** model using human **fetal** skin was applied to approach the question of the embryologic origin of human Merkel cells. Palmar and plantar skin from five **fetuses**, between 8 and 11 weeks of estimated **gestational** age (EGA), was xenografted to subcutaneous beds of nude mice. After 4 or 8 weeks of growth, **biopsies** were taken from these xenografts and examined for the presence of Merkel cells, using immunocytochemistry with antibodies specific for simple epithelial-type cytokeratins and neuron-specific enolase (NSE) as well as using electron microscopy. **Skin** from the same **fetuses** at the time of **transplantation** was screened in the same way. In all **fetuses**, no (or very scarce) epidermal Merkel cells were detected at the **transplantation** time, but in all cases abundant epidermal Merkel cells of apparent human origin were found after 4 or 8 weeks in xenograft **culture**. Dermal nerve fibers, as recognized by neurofilament antibodies, were scarce or essentially absent in the xenografts. These results indicate that Merkel cells regularly develop in epidermis dissected and xenografted in an early **fetal** stage, although the dissection implies the interruption of the dermal nerves. The results strongly support the notion of the origin of Merkel cells from epidermal precursor cells. The apparent absence of dermal Merkel cells and dermal nerve fibers in the xenografts suggests that the presence of dermal sensory nerve fibers may be required for the dropping off of epidermal Merkel cells into the upper dermis, which occurs in normal **fetal** development.

24/7/24 (Item 24 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


09331490 **PMID:** 2584745
**Development of human fetal skin transplanted to the nude mouse.**

Lane A T; Scott G A; Day K H
Department of Dermatology, University of Rochester School of Medicine and Dentistry, New York 14642.
Journal of investigative dermatology ( UNITED STATES ) Dec 1989 , 93 (6) p787-91 , **ISSN:** 0022-202X--Print **Journal Code:** 0426720
**Contract/Grant No.:** AM01212; AM; NIADDK NIH HHS United States; CA 11198; CA; NCI NIH HHS United States; HD20996; HD; NICHD NIH HHS United States
Publishing Model Print
**Document type:** Journal Article; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, P.H.S.
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed
Thirty-five human **fetal** skin (HFS) **grafts** were **transplanted** to nude mice for 7 to 70 d and evaluated

histologically with 64 **biopsies**. The estimated **gestational** ages (EGA) of the **grafts** at the time of the **transplantation** ranged from 8 to 19 weeks. The maturation of the **engrafted fetal skin** was evaluated by assessing epidermal, dermal, and appendage development. Within the nude mouse, the HFS demonstrated progression in stratification and maturation of the epidermis. The dermis increased in depth, adding fibrovascular stroma and adipose tissue. The appendages demonstrated invagination, differentiation, and progression of organogenesis. Subcutaneously placed **grafts** showed the same rate of HFS development as HFS in **utero**. The **grafts transplanted** to the surface of the nude mice and exposed to air demonstrated an acceleration of development. We conclude that HFS **transplanted** to the nude mouse is an effective in **vivo** model for maintaining and altering HFS maturation.

24/7/28 (Item 28 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


09241978 **PMID:** 2670751 **Record Identifier:** PMC1385319
**Inability of fetal skin to induce allograft tolerance in fetal lambs.**

McCullagh P
John Curtin School of Medical Research, Australian National University, Canberra.
Immunology ( ENGLAND ) Aug 1989 , 67 (4) p489-95 , **ISSN:** 0019-2805--Print **Journal Code:** 0374672
Publishing Model Print
**Document type:** Journal Article
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Other Citation Owner:** NLM
**Record type:** MEDLINE; Completed
**Fetal** lambs of 53-55 days gestation invariably failed to accept skin allografts from **fetal** donors of similar age but retained allografts from adult donors. Autografts of skin were accepted by 53-55-day **fetuses**. When the survival of allografts **transplanted** from **fetal** donors of a range of gestational ages was examined, skin from **fetuses** of up to 85 days was rejected but that from a 95-day donor was retained. Histological examination of **fetal** skin allografts revealed that these were subject to lymphocytic invasion, evident as the entry of lymphatic vessels and extravasation of lymphocytes within the first week after placement. These manifestations of an allograft reaction became more prominent during the following 2 weeks, with **graft** rejection being evident by the end of a month. Allografts of adult skin were subject to occasional focal lymphocytic infiltration but otherwise healed in uneventfully.

24/7/32 (Item 32 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


09174707 **PMID:** 2525209
**Prednisone, azathioprine, and cyclosporine A toxicity on human fetal pancreas.**

Leonard D K; Landry A S; Sollinger H W; Hullett D A
Department of Surgery, University of Wisconsin Hospital and Clinic, Madison 53792.

Journal of surgical research ( UNITED STATES ) Jun 1989 , 46 (6) p625-32 , **ISSN:** 0022-4804--Print **Journal Code:** 0376340
**Contract/Grant No.:** DK 44556; DK; NIDDK NIH HHS United States
Publishing Model Print
**Document type:** Journal Article; Research Support, U.S. Gov't, P.H.S.
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed
The limited clinical success of human **fetal** pancreas (HFP) **transplantation** may be related to **graft** toxicity caused by immunosuppressant agents. This study describes the effects of prednisone (PRED), azathioprine (AZA), and cyclosporine A (CSA) on HFP tissue in vitro and in **vivo**. To assess in vitro function, fresh HFP explants (1-2 mm3; 16-21 weeks **gestational** age) were prepared and **cultured** 72 hr in supplemented Ham's medium containing varying concentrations of each drug. Insulin release in response to high glucose (17 mM) and theophylline (10 mM) challenge was determined and compared to basal release in low glucose (3 mM) buffer. No significant difference in insulin release was observed between **culture** control tissue and drug-**cultured** tissue throughout the concentration range (10(-8) -10(-4) M; P greater than 0.05). To assess in **vivo** function, cyropreserved HFP explants were **transplanted** under the kidney capsule of streptozotocin-induced diabetic nude mice. Mice were immunosuppressed with PRED (1 mg/kg), AZA (1 mg/kg), CSA (30 mg/kg), or combined triple drug therapy (COMBO), and glucose levels followed weekly. Hyperglycemia reversal and insulin withdrawal were observed in all drug groups [PRED (4/6), AZA (4/6), CSA (2/4), COMBO, (2/4)] and were not statistically different from control (5/8; P greater than 0.8). Time to insulin withdrawal was significantly different from control (12.2 +/- 2.2 weeks; P less than 0.05) only for AZA (10 +/- 0 weeks; PRED, 12.3 +/- 2.6 weeks; CSA, 11 +/- 0 weeks; COMBO, 15 +/- 0 weeks). Additionally, oral glucose tolerance tests in all groups were equivalent to nondiabetic controls. We were unable to demonstrate PRED, AZA, or CSA toxicity on HFP.(ABSTRACT TRUNCATED AT 250 WORDS)

24/7/74 (Item 74 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


08244197 **PMID:** 3778360
**Effect of hypoxia on the initiation of secondary wool follicles in the fetus.**

Jacobs R; Falconer J; Robinson J S; Webster M E
Australian journal of biological sciences ( AUSTRALIA ) 1986 , 39 (1) p79-83 , **ISSN:** 0004-9417--Print **Journal Code:** 0370613
Publishing Model Print
**Document type:** Journal Article; Research Support, Non-U.S. Gov't
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed
The development of secondary wool follicles in single **fetal** sheep subjected to hypobaric hypoxaemia was studied. One group of pregnant ewes were exposed to 57.1 kPa from 30 to 135 days gestation. **Fetal** weights (mean +/- s.d.) for the hypoxaemic group (3.35 +/- 0.53 kg; n = 4) were significantly lower than for the controls (4.19 +/- 0.31 kg; n = 3, P less than 0.05). At 110 days gestation, a second group had arterial and venous catheters surgically implanted into the ewe and **fetus** and **skin** samples were taken from the **fetus**. At 120 days **gestation** (10 days after **surgery**) these animals were subjected to hypoxia for 20 days, at a level to maintain **fetal** carotid pO2 between 1.47 and 1.87 kPa (mean carotid pO2 for the control **fetuses** was 2.84 +/- 0.28 kPa). **Fetal** weight at 140 days was not

significantly different in the hypoxaemic and control groups. Morphometric analysis revealed that the secondary to primary follicle ratio (S:P) was less in both groups of hypoxaemic **fetuses** than in their respective controls. Although hypoxia for 20 days did not significantly alter **fetal** weight, it produced a low S:P ratio similar to the longer-term hypoxaemic animals. It is concluded that hypoxia has a marked effect in reducing the initiation of secondary follicles in the last third of **gestation**.

24/7/79 (Item 79 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


08158047 **PMID:** 3525802
**Can fetal and newborn allografts survive in an immunocompetent host?**

Foglia R P; LaQuaglia M; DiPreta J; Donahoe P K
Journal of pediatric surgery ( UNITED STATES ) Jul 1986 , 21 (7) p608-12 , **ISSN:** 0022-3468--Print **Journal Code:** 0052631
**Contract/Grant No.:** 1 K08 CA 0102 3-01; CA; NCI NIH HHS United States
Publishing Model Print
**Document type:** Comparative Study; Journal Article; Research Support, U.S. Gov't, P.H.S.
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed
This study explores methods of prolonging allograft survival by varying the ontogeny of the donor tissue (**fetal**, newborn, and adult), and the recipient (newborn and adult) in a series of outbred Sprague-Dawley rats. Allografts of renal or adrenal tissue (1 mm2) were **implanted** under the renal capsule of the recipient animal. Six experimental groups were constructed with the adult as the recipient in the first three, and four-to six-day-old newborn rat pups in the last three groups. A total of 212 animals were **grafted** and the animals were killed between 7 and 83 days later, and we carried out morphometric and histologic analyses of all **grafts**. In Group I (adult **donor**----adult host), all 17 **grafts implanted** for ten days or longer were completely rejected. In Group II, newborn tissue was **implanted** into 23 adults. By nine days after **implantation**, 17 **grafts** were fully rejected and the average **graft** had decreased in size by 68% +/- 78.7% (P less than .05 compared with their initial size). In contrast, when **fetal** renal or adrenal **grafts** were **implanted** into 93 adults (Group III) we saw a 17.6 +/- 9.7 fold increase in **graft** size when recipients were killed at least 7 days after **implantation** (P less than .05 compared with their initial size). When we used the newborn as a recipient, we found that all 20 adult **grafts** (Group IV) were rejected within 10 days. When newborn tissue was **implanted** into 15 newborns (Group V) all 15 animals rejected their **grafts** within ten days.(ABSTRACT TRUNCATED AT 250 WORDS)

24/7/91 (Item 91 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


07436088 **PMID:** 6708798
**Experimental foetal microsurgery as related to myelomeningocele.**

Brunelli G; Brunelli F
Microsurgery ( UNITED STATES ) 1984 , 5 (1) p24-9 , **ISSN:** 0738-1085--Print **Journal Code:**

8309230
Publishing Model Print
**Document type:** Journal Article
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed
To study this capacity of embryono-**foetal** tissue to regenerate without scar formation, experimental **intrauterine surgery** has been carried out in rabbits. This study has been performed with regard to the possibility of using **intrauterine** microsurgery to correct myelomeningocele in humans to avoid scar adhesion between the medulla and the **growing** vertebral bones and subsequent hydrocephalus. Lesions were produced in the spinal cord of rabbit **foetuses**, and observation after birth showed repair without scar formation. Further research is in progress to confirm these findings and to adapt this procedure to the clinical situation.

24/7/97 (Item 97 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


07007271 **PMID:** 6756021
**Transfer of tissue cells to the fetus.**

Gustavii B; Lofberg L; Olofsson T
Acta obstetricia et gynecologica Scandinavica ( SWEDEN ) 1982 , 61 (4) p361-5 , **ISSN:** 0001-6349--Print **Journal Code:** 0370343
Publishing Model Print
**Document type:** Journal Article
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed
Several diseases of the **fetus** can be diagnosed prenatally. Some of them are due to insufficient production of a specific substance. It was therefore thought that, with the aid of fetoscopy, it might be possible to supply such an affected **fetus** with cells capable of producing the deficient substance. To ascertain whether tissue cells injected into the feto-placental circulation can pass through the microcapillaries of the placenta as early as in the second trimester, 125I-labelled cells of **fetal** liver were injected into an umbilical vessel ex utero after therapeutic abortion by hysterotomy. The distribution pattern of the radioactivity indicated that donor cells passed through the microcapillaries of the placenta and reached the target, i.e., the liver. In each experiment, the activity in the liver was higher than that in other organs studied. The activity in the brain and in the lungs was low. Transfer of **tissue** cells from a normal **fetus** to the circulation of an affected **fetus** in **utero** thus seems feasible. Permanent colonization of such cells would be facilitated by the fact that the **donor** as well as the recipient are **fetuses** of the second trimester and thus immunologically immature.

24/7/102 (Item 102 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


06354142 **PMID:** 7397075
**Fetoscopy guided by real-time ultrasound for pure fetal blood samples, fetal skin samples, and examination of the fetus in utero.**

Rodeck C H
British journal of obstetrics and gynaecology ( ENGLAND ) Jun 1980 , 87 (6) p449-56 , **ISSN:** 0306-5456--Print **Journal Code:** 7503752
Publishing Model Print
**Document type:** Journal Article
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed
Techniques for sampling pure **fetal** blood, **fetal** skin and for **fetal** examination by **fetoscopy** are described in detail after experience gained in 151 diagnostic **fetoscopies** on 145 patients. Of particular importance were a real-time scanner and a particle size analyser. The region of **insertion** of the umbilical cord into the placenta was the optimum site for obtaining pure **fetal** blood, and this was achieved in 136 out of 143 patients (95 per cent) sampled at 18 to 23 weeks **gestation**. This made maternal blood transfusion before prenatal diagnosis of haemoglobinopathies unnecessary. An anterior placenta rarely prevented successful **fetoscopy**, and often made **fetal** blood sampling easier. Four **fetal** losses (3.7 per cent) were judged to be due to **fetoscopy**.

24/7/121 (Item 8 from file: 5)
DIALOG(R)File 5: Biosis Previews(R)


07776410 **Biosis No.:** 198580085305
**CULTURE OF HUMAN FETAL PANCREAS AND ISLET TRANSPLANTATION IN 24 PATIENTS WITH TYPE 1 DIABETES MELLITUS**

**Author:** HU Y-F (Reprint); ZHANG H; ZHANG H-D; SHAO A-H; LI L-X; ZHOU H-Q; ZHAO B-H; ZHOU Y-G
**Author Address:** DIV ENDOCRINOLOGY METABOLISM, DEP INTERNAL MED, SHANGHAI FIRST PEOPLE'S HOSPITAL, SHANGHAI**CHINA
**Journal:** Chinese Medical Journal (English Edition) 98 ( 4 ): p 236-243 1985
**ISSN:** 0366-6999
**Document Type:** Article
**Record Type:** Abstract
**Language:** ENGLISH

**Abstract:** The **culture** of human **fetal** pancreas demonstrated that amylase both in **culture** media and pancreatic tissues were undetectable on the 5th day of **culture**. The average contents of insulin in **culture** media gradually decreased during the period from the 2nd to the 10th day. The insulin release test proved that B cells of **fetal** islet remained well functioning. Histologic examination showed that after short-term **culture** the exocrine component of **fetal** pancreas rapidly degenerated, necrosed and disappeared while islet cells and ductule-like tissues kept proliferating and developing. The **culture** of **fetal** pancreas demonstrated that it may be the ideal method for preparing **donor** islet tissue. Twenty-four type 1 diabetics were **transplanted** with short-term **cultured** islet tissues of 6-11 human **fetal** pancreases with **gestation** age of 13-34 wk. The islet **grafts** were **transplanted** i.m. or i.p. in 7 and 17 patients, respectively. The **transplantations** were effective in all of the patients except 1. The time interval between the **transplantation** and the beginning of taking effect was 18.26 .+-. 10.45 days (7-52). These patients were followed up for 6-16 mo. The average daily insulin requirements of 25 diabetics before **transplantation** were 53.6 .+-. 13.28 .mu. (38-84 .mu.) and at the last follow-up

examinations 21.48 .+-. 9.67 .mu. (8-44 .mu.), being reduced by 58.81 .+-. 16.66% (28.57-89.47%). The average fasting and postprandial plasma glucose levels were 211.87 .+-. 82.31 mg/dl and 225.78 .+-. 98.52 mg/dl before **transplantation** and were 140.87 .+-. 29.85 mg/dl and 163.82 .+-. 69.77 mg/dl at the last follow-up examinations. Two patients ceased insulin treatment for a period of time. The islet allografts of 23 effectively **transplanted** diabetics all worked well, none was rejected.



09259909 **PMID:** 2776826

**Interception of the development of self tolerance in fetal lambs.**

McCullagh P
Department of Immunology, John Curtin School of Medical Research, Australian National University, Canberra, A.C.T.

European journal of immunology ( GERMANY, WEST ) Aug 1989 , 19 (8) p1387-92 , **ISSN:** 0014-2980--Print **Journal Code:** 1273201
Publishing Model Print
**Document type:** Journal Article
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed

Investigation of the nature of immunological self tolerance has usually relied upon experimental protocols in which the tolerant state is interrupted in mature animals with the production of autoimmune disease. While such research has improved the understanding of those processes operative in overt autoimmunity, it has not been informative in relation to events associated with the establishment of self tolerance. Any description of this state which is to be based on observation will necessitate the use of experimental systems that permit observation of animals during the development of self tolerance. The present experiment entailed intervention approximately one third of the way through the gestation period of **fetal** lambs. An earlier experiment had established that 54-day **fetal** lambs would accept allografts of adult skin. This indicated that the capacity to discriminate between self and non-self had not been acquired at that age. **Fetuses** at this stage of **gestation** were submitted to either partial or total **removal** of the thyroid gland. The excised tissue was then **implanted** in nude mice for periods of 5 to 9 weeks. It was subsequently replaced subcutaneously, either in the original **donor** or in another fetus at a comparable stage of **gestation**. At postmortem examination, several weeks later, self **implants** in lambs from which the thyroid gland had been completely **removed** displayed autoimmune thyroiditis of varying degrees of severity. However, self **implants** in partially thyroidectomized animals were uniformly free from autoimmune manifestations. This implied that these reactions had not been directed against contaminating murine tissues in the **implants** replaced in completely thyroidectomized lambs. All allogeneic **implants** were subject to vey heavy lymphocytic infiltration, usually with accompanying necrosis consistent with allograft rejection. This was taken as an indication that hypothyroid **fetal** lambs had become immunocompetent by the time of thyroid reimplantation. Spontaneous immunological reactivity against reimplanted self thyroid tissue by thyroidectomized lambs was interpreted as a failure to acquire the capacity for self recognition as a result of antigen deprivation.

28/7/125 (Item 32 from file: 5)
DIALOG(R)File 5: Biosis Previews(R)


0000897202 **Biosis No.:** 19573100024838
**Studies on the development of wool follicles in tissue culture**

**Author:** HARDY MARGARET H; LYNE A G
**Journal:** AUSTRALIAN JOUR BIOL SCI 9 ( (4) ): p 559-574 1956 1956
**Document Type:** Article
**Record Type:** Abstract
**Language:** Unspecified

**Abstract:** Explants of skin from 4 sheep **fetus**es of different ages were **cultivated** for periods of up to 38 days in a medium of fowl plasma and chicken embryo **extract**. Development of wool follicles of different types was studied both in these living explants and in serial sections from them. Explants from a 70-day **fetus** showed the complete development of primary wool follicles in vitro from epidermal plugs to fully differentiated follicles with emerging wool fibers. Histology of these follicles was normal and they developed at about the same rate as in the **fetus** in **utero**. Sebaceous glands of normal size and structure were differentiated in vitro, and, for the first time in any species, the formation of rudimentary sudoriferous glands in vitro was reported. In explants from an 80-day **fetus**, primary wool follicles which were at an early stage of development produced keratinized wool fibers at a slightly faster rate than in the **foetus** in **utero**, but secondary follicles did not form. Sebaceous glands were formed and sudoriferous glands underwent normal differentiation. The primary follicles in explants from a 98-day **fetus** produced many large wool fibers but development was slower than in the **fetus**. There was some evidence for the formation of new secondary follicles in vitro. There was little or no development in the wool follicles in explants from a 125-day **fetus**. The potential value of this method for studying mechanical, nutritional, or hormonal influences on the initiation and early development of wool follicles and the production of wool is indicated. ABSTRACT AUTHORS: Auth. sum

31/7/1 (Item 1 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


09241978 **PMID:** 2670751 **Record Identifier:** PMC1385319
**Inability of fetal skin to induce allograft tolerance in fetal lambs.**

McCullagh P
John Curtin School of Medical Research, Australian National University, Canberra.
Immunology ( ENGLAND ) Aug 1989 , 67 (4) p489-95 , **ISSN:** 0019-2805--Print **Journal Code:** 0374672
Publishing Model Print
**Document type:** Journal Article
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Other Citation Owner:** NLM
**Record type:** MEDLINE; Completed

**Fetal** lambs of 53-55 days **gestation** invariably failed to accept **skin** allografts from **fetal** donors of similar age but retained allografts from adult donors. **Autografts** of **skin** were accepted by 53-55-day

**fetuses**. When the survival of allografts transplanted from **fetal** donors of a range of **gestational** ages was examined, **skin** from **fetuses** of up to 85 days was rejected but that from a 95-day **donor** was retained. Histological examination of **fetal skin** allografts revealed that these were subject to lymphocytic invasion, evident as the entry of lymphatic vessels and extravasation of lymphocytes within the first week after placement. These manifestations of an allograft reaction became more prominent during the following 2 weeks, with graft rejection being evident by the end of a month. Allografts of adult **skin** were subject to occasional focal lymphocytic infiltration but otherwise healed in uneventfully.

31/7/8 (Item 8 from file: 155)
DIALOG(R)File 155: MEDLINE(R)


05315793 **PMID:** 821742
**In utero fetal lamb thyroidectomy and thyroid autograft transplantation.**

Belin R P; Hollingsworth D R; Reid M C; Davis S L; Beihn R
Endocrine research communications ( UNITED STATES ) 1976 , 3 (2) p133-44 , **ISSN:** 0093-6391--Print **Journal Code:** 0426337
Publishing Model Print
**Document type:** Journal Article
**Languages:** ENGLISH
**Main Citation Owner:** NLM
**Record type:** MEDLINE; Completed
Our **fetal** surgical model was utilized to perform in **utero fetal** lamb thyroidectomy and **autograft** transplantation of thyroid **tissue** to **fetal** thigh at 82-93 days **gestation**. Successful in **utero** transplantation was possible in two of six experimental animals. In one twin pregnancy with an unoperated control lamb, observations were continued to age six months. The athyrotic lamb with a thigh **autograft** was larger at birth and had a transient weak sucking reflex and awkward gait. It then grew and developed normally with no stigmata of cretinism or delay in bone maturation. At age six months an increase in thyroid stimulating hormone (oTSH) was the single distinguishing observation in the twin with the transplant. Although oTSH levels were elevated to age six months, the pituitary continued to be responsive to thyrotropin releasing hormone (TRH) stimulation. These findings suggest that in **utero** transplantation of thyroid **tissue** is technically feasible and that the previously described development of in **utero** cretinism following **fetal** thyroidectomy can be prevented by a functioning **autograft**. This technique will be useful in attempting allograft transplantation in **utero**.

31/7/13 (Item 5 from file: 5)
DIALOG(R)File 5: Biosis Previews(R)


0000787495 **Biosis No.:** 19542800011239
**Skin transplantation in the foetal lamb**

**Author:** SCHINCKEL P G; FERGUSON K A
**Journal:** AUSTRALIAN JOUR BIOL SCI 6 ( (3) ): p 533-546 1953 1953

**Document Type:** Article
**Record Type:** Abstract
**Language:** Unspecified

**Abstract: Skin autografts** and homografts were performed in **fetal** lambs between the ages of 80 and 117 days. By means of histological examination following grafting, visual and histological examinations after birth, and by the use of second-set homografts it was established that homografts are actively rejected by the **fetus**. This rejection gave every indication of belonging to the general class of activity acquired immune responses and in all respects confirmed at the **fetal** stage the observations of Medewar (1944, 1945) on young adult animals. Homografts in which the ewe was used as **donor** were also rejected by the **fetus**, indicating that the reaction was of **fetal** and not maternal origin. The expts. established that the **fetal** lamb is capable of making an immune response to the presence of foreign **tissue**. This finding is at variance with current concepts of the immunological behavior of **fetuses**.

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S1     1002508   FETAL  OR FETUS?  OR FOETAL OR FOETUS?
S2      183725   S1/1991-1996
S3      170615   S1/1997-2001
S4      250196   S1/2002-2009
S5      397977   S1 NOT (S2:S4)
limitall/s5
S6          69  PANCREA?()CELLS
S7          40   RD S6  (unique items)
S8          40   S7 AND S1


Nothing additional
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